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ABSTRACT

A study investigated the interactions between leadership style and the personality variable locus of control on vocational teacher job satisfaction. It used a 2x2x2 factorial design to explore three independent variables: (1) the consideration dimension of leader behavior; (2) the initiating structure dimension of leader behavior; and (3) locus of control. The sample consisted of 185 Ohio joint vocational school teachers. Three instruments were used: (1) the Leader Behavior Description Questionnaire--Form XII; (2) the Rotter Internal-External Control Scale; and (3) the Job Descriptive Index. Findings indicated the leadership dimension of consideration had a significant effect upon job satisfaction of teachers; initiating structure was not supported, although teachers evidently were more satisfied under a superintendent who was structured; and locus of control may be an important factor influencing teacher job satisfaction. When the consideration and initiating structure variables were crossed, the high-high leader paradigm was supported. When the locus of control and initiating structure variables were crossed, internals had greater job satisfaction. When consideration and locus of control interactive effects were analyzed, internally controlled teachers had greater job satisfaction. When the three variables were crossed, the high-high leader paradigm appeared tenable only for the internally controlled teachers. (56 references) (YLB)

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INTERACTIONS BETWEEN SUPERINTENDENT LEADER BEHAVIOR AND LOCUS OF CONTROL ON JOB SATISFACTION AS PERCEIVED BY VOCATIONAL TEACHERS

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INTERACTIONS BETWEEN SUPERINTENDENT LEADER BEHAVIOR AND LOCUS OF CONTROL ON JOB SATISFACTION AS PERCEIVED BY VOCATIONAL TEACHERS

The importance of leadership to the success of vocational education is not a new revelation. During the 1975 National Leadership Development Seminar for State Directors of Vocational Education, a task force, in describing the essential features of effective vocational education, stated:

> The soundness of the program philosophy, the comprehensiveness of goals and objectives, the appropriateness of program standards, and the degree to which vocational education is effective are dependent upon the quality of state and local leadership and instructional personnel. A supply of competent personnel is vital to program success (Koble, Newton, and Lewis, 1976, p. 126).

The United States Congress recognized the need for competent leadership in vocational education when it passed the Education Professions Development Act, Part F--Training and Development Programs for Vocational Education Personnel (P.L. 90-576). Specifically, Section 552 of this Act, Leadership Development Awards, stated, in part:

> In order to meet the needs in all of the States for qualified vocational education personnel (such as administrators, supervisors, teacher educators, researchers, and instructors in vocational education programs) the Commissioner shall make available leadership development awards in accordance with the provisions of this part. . . .Title II, Part F, Section 552).

Later, Part F was continued in the Education Amendments of 1976 (P.L. 94-482) under the title: Training and Development Programs for Vocational

Education Personnel.

The Carl D. Perkins Vocational Education Act (P.L. 98-524) reaffirmed the need for vocational education leadership when Congress mandated that the National Center for Research in Vocational Education continue to be operated. With regard to leadership, the Act stated in part:

> The National Center shall--
>
> . . . . "2 provide leadership development through an advanced study center and inservice education activities for State and local leaders in vocational education; (Title IV, Part A, Section 404).

At about the same time the Carl D. Perkins Vocational Education Act was enacted, the National Commission on Secondary Vocational Education (1984) also emphasized the essential role of leadership in vocational education when they asserted: "Effective leadership at local, state, and federal levels is central to improving and expanding vocational education" (p. 27).

Although action has been taken to fulfill the need for competent leaders in vocational education, the concept of leadership has remained elusive. In fact, Burns (1978), as quoted in Bass (1981; p. 5) stated: "Leadership is one of the most observed and least understood phenomenon on earth." Therefore, given that vocational education leadership is pivotal to the future success of vocational education, more needs to be understood about how this complex leadership phenomena operates, especially within the vocational education

setting.

Statement of the Problem

Limited research was found that investigated the relationships of leader behavior, subordinate locus of control, and subordinate job satisfaction in the formal organization. In the research that has been conducted (Pryer and Distefano, 1971; Runyon, 1973; Evans, 1974; Mitchell, Smyser, and Weed, 1975), the findings indicated, in general, that subordinates with an internal locus of control were more satisfied under a considerate style of leadership; while subordinates with an external orientation were more satisfied under a directive style of leadership. Surprisingly, while subordinate locus of control may be a significant personality factor influencing leader behavior and subordinate job satisfaction perceptions (House, 1971; Durand and Nord, 1976; Anderson and Schneier, 1978; Christie, 1981; Decaro, 1983; and Pirzadeh, 1984), there have been no studies conducted in the vocational education setting that have investigated the interactive effects of subordinate locus of control with leader behavior on subordinate job satisfaction.

Specifically, if school-site leaders of vocational schools are to strive for leadership improvement, an understanding of the interactions between

their leader behavior and locus of control on job satisfaction as perceived by their respective vocational teachers appeared to be a logical and essential prerequisite. However, these interactive effects were not known. Until these interactive effects were determined and understood, efforts to improve vocational education leadership within the school may have been problematic. Therefore, the problem was how to ameliorate this problematic situation so that school-site leadership at vocational schools could be enhanced.

Purpose of the Study

The purpose of this study was to determine the leadership behaviors of joint vocational school superintendents in Ohio as perceived by their vocational teachers and to examine interactive effects between this perceived leadership behavior and vocational teacher locus of control on job satisfaction. In essence, this study was an investigation of the interactions between leadership style and the personality variable locus of control on vocational teacher teacher job satisfaction. As a result of this study, the researcher hoped that a better understanding of the complex interactions between supervisor and subordinates could be gained. Once determined, these interactions would provide implications for improving school-site leadership within the joint vocational school setting.

Significance of the Study

The rationale for the justification of this study was inherent in two main research perspectives: a leadership research perspective and an effective schools research perspective.

Leadership Research Perspective

Unlike business and industry, state vocational education departments have allocated little of their human and financial resources to the understanding of the relationships between leaders and their subordinates. While business and industry have been undertaking leader-subordinate research for many years, there is a scarcity of such research pertaining to the vocational education setting. Thus, given the uncertainties of the relationships between vocational school leaders and their subordinates, the assertion that leadership studies in the vocational education setting needed to be undertaken seemed logical.

Much of the organizational leadership studies have investigated the relationships of leadership styles (e.g., consideration and initiating structure) and subordinate performance and job satisfaction (Greene, 1975). However, few studies have investigated the relationships of subordinate perceptions of leader behavior and subordinate perceptions of their locus of

control and job satisfaction. Several scholars (Runyon, 1973; Durand and Nord, 1976; Anderson and Schneier, 1978; Christie, 1981; Decaro, 1983; Pirzadeh, 1984) concurred that the personality dimension, locus of control, may be an important factor in the supervisor-subordinate relationship and that future leadership investigations in this area may be fruitful. However, a review of the literature discovered that no studies focused their investigations on the interactive effects of leader behavior, subordinate locus of control, and subordinate job satisfaction in the vocational education school setting.

In an effort to fill this leadership research void, this study attempted to identify the interactive effects between joint vocational school superintendent leader behavior and vocational teacher locus of control on job satisfaction as perceived by joint vocational school vocational teachers. For example, if it can be found that superintendents with a considerate orientation were associated with internally controlled vocational teachers who had high job satisfaction; while superintendents with an initiating structure orientation were associated with externally controlled vocational teachers who had high job satisfaction, then such findings would underscore the importance of locus of control on the leader-subordinate relationship.

Moreover, such findings would suggest that superintendents should

behave in a considerate manner toward internally controlled vocational teachers and in a directive manner toward externally controlled vocational teachers. In essence, results of this study would provide joint vocational school superintendents with insights on how they could improve their leader-subordinate relationship. Likewise, those involved in vocational education leadership development may find the results of this study beneficial to their leadership development strategies.

Therefore, this study was significant from a leadership research perspective since the knowledge learned about the interactive effects of leader behavior, subordinate locus of control, and subordinate job satisfaction suggested implications for improving joint vocational school leadership; which in turn, suggested that joint vocational school effectiveness would be enhanced. In addition, from a leadership research methodological view, this study was unique in that the major variables under study were incorporated into a three-way factorial design; thus allowing for a focused investigation for possible interactive effects. Prior research efforts that included these variables had not investigated for possible three-way interactions.

Effective Schools Research Perspective

Inherent in the effective schools research literature (Phi Delta Kappa,

1980; Morris, 1981; Hathaway, 1982; Mackenzie, 1983; Goodlad, 1984; Purkey and Smith, 1984) was agreement on the importance of the school-site leader in facilitating school improvement. For example, Hathaway (1982) stated:

> Principals represent the organizational authority of the school, and in that regard, they serve to symbolize what the school stands for, how it will operate, and what is important. In general, they set the educational tone for the school. The research on effective schools, effective educational innovations, and effective strategies for planning change all points to the principal as a singularly important person in the successful social system (p. 16).

Moreover, Mackenzie (1983), after reviewing the school effectiveness literature, identified leadership, efficacy, and efficiency as three major dimensions of effective schools. In reference to leadership, Mackenzie posited:

> Conditions for efficacy and efficiency depend on leadership. . . . Principals can obstruct or facilitate the process of school reform enough to determine whether anything happens or not (McCarthy et al., 1980). Thus most observers come down on the side of the principal as a key actor, particularly in setting policy. . . . Instructional leadership can and should be encouraged throughout the school community, but principals are in a key position to provide consistent and continuous leadership to set a tone of order and purpose for the school as a whole (p. 11).

Although the effective schools literature, by and large, focused on schooling in general, the importance of the leadership role of the joint vocational school superintendent is commensurate to that of the role of the

principal. In essence, both individuals are in the topmost school-site leadership position and, thus, both can facilitate or impede the school improvement process. Moreover, their leader behavior is interpreted by their subordinates as substantive impressions of leadership quality. Since quality principal leadership is strongly associated with teacher satisfaction (Morris, 1981), the assertion that superintendents of joint vocational schools are also key elements in the job satisfaction of their vocational teachers seemed logical. Therefore, from an effective schools research perspective, this study appeared justifiable and essential.

Research Hypotheses

The following research hypotheses were tested at an alpha level of .05:

1. There will be no difference in the total job satisfaction scores of internally and externally controlled joint vocational school vocational teachers who perceive their superintendent as being on one of the following leadership dimensions:

   (a) High Consideration-High Initiating Structure (HC-HIS)
   (b) High Consideration-Low Initiating Structure (HC-LIS)
   (c) Low Consideration-High Initiating Structure (LC-HIS)
   (d) Low Consideration-Low Initiating Structure (LC-LIS)

In effect, this hypothesis stated that there will be no significant three-way interaction between the variables consideration, initiating structure, and

locus of control on job satisfaction.

2. There will be no difference in the total job satisfaction scores of joint vocational school vocational teachers who perceive their superintendent as being either low or high on the leadership dimension of consideration from those who perceive their superintendent as being either low or high on the leadership dimension of initiating structure.

In effect, this hypothesis stated that there will be no significant two-way interaction between the variables consideration and initiating structure on job satisfaction.

3. There will be no difference in the total job satisfaction scores of internally and externally controlled joint vocational school vocational teachers who perceive their superintendent as being either low or high on the leadership dimension of initiating structure.

In effect, this hypothesis stated that there will be no significant two-way interaction between the variables locus of control and initiating structure on job satisfaction.

4. There will be no difference in the total job satisfaction scores of internally and externally controlled joint vocational school vocational teachers who perceive their superintendent as being either low or high on the leadership dimension of consideration.

In effect, this hypothesis stated that there will be no significant two-way

interaction between the variables locus of control and consideration on job satisfaction.

5. There will be no difference in the total job satisfaction scores of joint vocational school vocational teachers who perceive their superintendent as being high on the leadership dimension of consideration from those who perceive their superintendent as being low on the leadership dimension of consideration.

In effect, this hypothesis stated that there will be no significant main effect for the leadership dimension of consideration.

6. There will be no difference in the total job satisfaction scores of joint vocational school vocational teachers who perceive their superintendent as being high on the leadership dimension of initiating structure from those who perceive their superintendent as being low on the leadership dimension of initiating structure.

In effect, this hypothesis stated that there will be no significant main effect for the leadership dimension of initiating structure.

7. There will be no difference in the total job satisfaction scores of joint vocational school vocational teachers who are internally controlled and those who are externally controlled.

In effect, this hypothesis stated that there will be no significant main effect for the personality dimension of locus of control.

METHODOLOGY

Research Design

The research design utilized in this study is classified as a 2x2x2 factorial design. According to Kerlinger (1973), a factorial design "is the structure of research in which two or more independent variables are juxtaposed in order to study their independent and interactive effects on a dependent variable" (p. 351). A geometric display of the design employed in this study is depicted in Figure 1.

Three independent variables form the three dimensions of this rectangular solid. Factor A, the consideration dimension of leader behavior, and, Factor B, the initiating structure dimension of leader behavior, mark off the width and height, respectively. The third independent variable, locus of control, is designated as Factor C and it marks off the depth of the solid. Each factor has two levels. Factors A and B each have a high and low level. Factor C has an internal and an external level. Each of the eight cells, or blocks, represent a different combination of the levels of the three factors. Since this is a 2x2x2 factorial design, the three independent variables are arranged in a completely crossed fashion (Keppel, 1982). Furthermore, since the independent variables in this study are not manipulated, the study is nonexperimental. Job satisfaction is the dependent variable in this study.

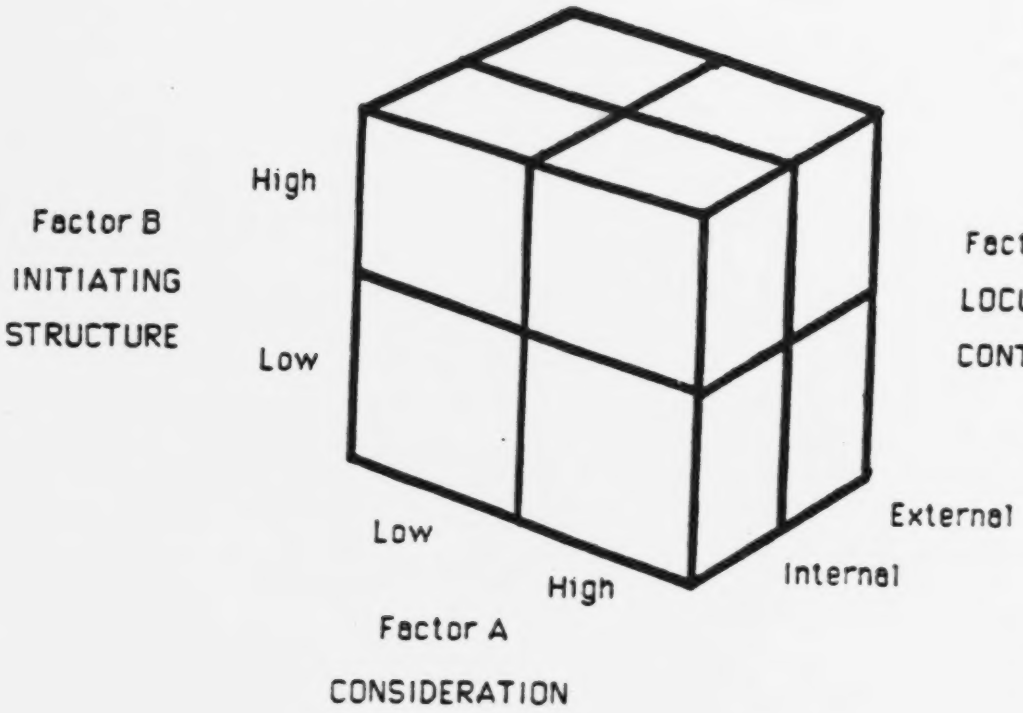

Figure 1

Schematic Diagram of the Research Design

Ary, Jacobs, and Razavieh (1979) discussed the importance to studying the effects on a dependent variable of several independent variables in a factorial design. They asserted:

> Educational research has been criticized in the past because of an overreliance on the one-variable design. Critics have pointed out that in the case of complex social phenomena there are generally several variables interacting simultaneously, and to attempt to restrict a study to one variable is to impose an artificial simplicity on a complex situation. . . . In fact, it has been said that the real breakthrough in educational research came with Fisher's development of factorial designs (p. 255).

In addition, Pedhazur (1982) noted this advantage of factorial designs:

> The first and perhaps the most important advantage is that it is possible to determine whether the independent variables interact in their effect on the dependent variable. An independent variable can "explain" a relatively small proportion of the variance of a dependent variable, whereas its interaction with other independent variables may explain a relatively large proportion of the variance. Studying the effects of independent variables in isolation cannot reveal the interaction between them (p. 335).

Furthermore, Pedhazur (1982) noted that it is desirable that group sample sizes be equal so that statistical test sensitivity is optimized. In other words, when certain assumptions that underlie these tests were violated, distortions were minimized when cell sizes were equal.

In experimental factorial designs, the researcher can randomly assign subjects to the various blocks to form equal cell sizes. Factorial designs that have equal cell sizes were referred to in the literature as orthogonal, or balanced designs. In these designs, the independent variables were independent of each other. In other words, the correlation between them was essentially zero. Thus, independent effects of each independent variable were determined with little difficulty.

In nonexperimental research, Pedhazur (1982) noted that "the variables are almost always correlated with each other" (p. 386). Especially in nonexperimental factorial designs, unequal cell frequencies usually occurred "because of correlations among independent variables or predictors"

(Pedhazur, 1982, p. 382). The literature referred to factorial designs with unequal cell sizes as nonorthogonal, or unbalanced. Unbalanced nonexperimental designs may have validity problems since "it is difficult to determine the independent effects of each independent variable since they are confounded with one another" (Spector,1981, p. 58). The popular practice of artificially balancing unbalanced designs by randomly removing the appropriate amount of cell subjects until equal cell frequencies were reached was not recommended by Keppel (1982) and Pedhazur (1982). They stated that such a procedure complicated the task of determining the independent effects of each independent variable. Furthermore, the end effect of such a practice would more than likely increased the threat to the validity of the results.

Therefore, since this factorial design of this study was nonorthoganal, corrective procedures were taken by this researcher to lessen the risk of making erroneous interpretations of the research results. These procedures corresponded with the criteria that Pedhazur suggested for reducing this risk:

> Whether or not the interpretation of results is simple or complex, clear-cut or ambiguous, depends not on the analysis per se but, among other things, on the substantive meaning of the variables being used and their operational definitions, on the theory, and the overall validity of the research design (p. 385).

Given this direction, the following sections on subject selection, instrumentation, data collection, and analysis of data address the issue of how to minimize threats to the validity of this study.

Subject Selection

The target population for this study was Ohio joint vocational school vocational teachers who were employed full-time at their respective schools. Given that there are 49 joint vocational schools operating in the state of Ohio, the limited financial resources of this reseacher precluded an investigation of the target population. Consequently, an accessible population was defined as those joint vocational school vocational teachers who were employed full-time at the aforementioned vocational schools that were located within a 60 mile radius of Columbus, Ohio. Based on the information provided by the State of Ohio Department of Education, there were 12 joint vocational schools that were located within this 60 mile radius.

The frame for the accessible population was determined by information provided by the State of Ohio Department of Education, Division of Vocational Education. Since the assumption was made that this teacher information was correct, frame error was ameliorated. The total population in this frame was determined to be N=436.

The appropriate sample size was estimated by utilizing the following formula from Cochran (1977):

$$n_o = \frac{t^2\ pq}{d^2}$$

where:

d = the acceptable margin of error for the proportion being estimated.

t = the risk the researcher is willing to take that the actual margin of error may exceed the acceptable margin of error.

p = the estimated proportion of the population that would fall above the mean for all response items in general.

q = 1-p. "Since the product pq increases as p moves toward 1/2, or 50%, a conservative estimate of n is obtained by choosing for p the value nearest to 1/2 in the range in which p is thought likely to lie" (Cochran, 1977, p. 76).

Furthermore, if n_o/N was negligible (<.05), n_o was a satisfactory estimate.

However, if $n_o/N > .05$, then Cochran recommended that the finite population correction formula be used:

$$n = \frac{n_o}{1 + (n_o/N)}$$

In this study:

$d = \pm .05$

t = risk of 1 in 20 (95 percent confidence level). Since t is the abscissa of the normal curve that cuts off an area of alpha at the tails, t = 1.96, rounded to 2.00.

$p = .50$

$q = 1-p$; thus $q = .50$

Solving for n_o,

$$n_o = \frac{(2)^2(.50)(.50)}{(.05)^2}$$

$$n_o = \frac{1.00}{.0025}$$

$$n_o = 400$$

Since $n_o/N = .92$, the finite population correction was needed. Therefore, the appropriate sample size, solving for n, was:

$$n = \frac{400}{1 + (400/436)}$$

$$n = 208.3$$

The needed sample size of 208.3 was rounded up to 210, which represented approximately 48 percent of the accessible population.

The names of the 436 vocational teachers were numbered by this researcher from 1 to 436, consecutively. Names were checked to ensure that no names were on the list more than once. From this population, a simple random sample of 210 teachers was selected by using a table of random numbers. The subject selection process utilized in this study controlled the threat of sampling error and selection error.

Instrumentation

Three well-known instruments were used in this study to obtain measures on the three independent variables and the one dependent variable.

The Leader Behavior Description Questionnaire-Form XII (Stogdill, 1963) was used to obtain measures on the consideration and initiating structure independent variables. The Rotter Internal-External Control Scale (Rotter, 1966) was used to measure the third independent variable, locus of control. The dependent variable, job satisfaction, was measured by the Job Descriptive Index (Smith et al., 1969). A brief description of the reliability and validity of each instrument is presented in the following subsections. By using reliable and valid instruments, measurement error in this study was minimized.

Leader Behavior Description Questionnaire-Form XII (LBDQ-12). The LBDQ-12 was used extensively in previous leadership research. Although 12 subscales of leader behavior are included in this instrument, only the consideration and initiating structure subscales were selected for inclusion in this study. The use of part of the LBDQ-12 total scale was a common practice, especially with the consideration and initiating structure factorially-defined subscales (Aiken et al., 1972). These two subscales were each comprised of 10 item statements that elicited a Likert-type response. Given the preponderance of information pertaining to the reliability of the total instrument and to the consideration and initiating structure subscales, a pilot test of these two subscales was not necessary. Stogdill (1963)

reported modified Kuder-Richardson reliability coefficients that ranged from .76 to .87 for the consideration subscale; and .70 to .80 for the initiating structure subscale. These coefficients came from a wide assortment of samples that included ministers, community leaders, corporation presidents, labor presidents, college presidents, senators, and aircraft executives. Further reliability evidence was provided by Schriesheim and Kerr (1974) when they reported Cronbach alpha coefficients of .71 and .75 for the consideration and initiating structure subscales, respectively.

In reference to validity, Stogdill (1969) concluded that the LBDQ-12 subscales measured what they purported to measure. However, Dipboye (1978), in a review of the LBDQ-12, asked: "Is the LBDQ-12 a valid measure of the leadership behaviors the authors of the scales claim to measure?" (p. 1750). In answering this question, Dipboye posited:

> One can approach this question by examining several facets of validity, including the item content, the correlations of the scales with the external criteria, the ability to predict these criteria over time, and the correlation of the scales with other scales purported to measure similar dimensions of leader behavior (p. 1750).

Given this criteria and the studies conducted by Stogdill (1969, 1974) and Yunker and Hunt (1976), Dipboye concluded:

> The LBDQ-12 initiation of structure and consideration are the most commonly used scales and have been found to correlate

> significantly with satisfaction and performance, although the direction of these correlates varies with situational differences.
>
> . . . . The LBDQ-12 appears to possess concurrent validity in that its scales have been found to correlate with the external criteria of job satisfaction and performance and are capable of distinguishing between persons displaying behaviors corresponding to the dimensions. The instrument appears to be the best of the Ohio State Leadership Scales in that it provides measures of initiation of structure and consideration that are unconfounded with punitive leadership items (p. 1751).

Rotter Internal-External Control Scale (I-E Scale). The I-E scale also was used extensively in previous research. Phares (1976) described the I-E scale as an additive scale:

> . . . .That is, items represent an attempt to sample I-E beliefs across a wide range of situations, such as interpersonal situations, school, government, work, and politics. Because it samples a variety of areas, the scale can more nearly lay claim to being a measure of generalized expectancy. . . . Thus, we have a scale that potentially will predict moderately well across a number of situations (p. 42).

Internal consistency estimates of the I-E Scale, as reported by Rotter (1966), ranged from .65 to .79. Rotter reported:

> While these estimates are only moderately high for a scale of this length, it should be remembered that the items are not arranged in a difficulty hierarchy, but rather are samples of attitudes in a wide variety of situations. The test is as additive one and items are not comparable. Consequently, split-half or matched-half reliability tends to underestimate the internal consistency (p. 10).

Significant evidence for the construct validity of the I-E Scale was documented by Rotter (1966). Moreover, the scale has discriminant validity as evidenced by its low relationship with other variables, such as intelligence, social desirablity, and political liberalness. A summary of the studies pertaining to the validity of the I-E Scale was found in Rotter (1966).

Job Descriptive Index (JDI). The JDI also was used extensively in previous research and, consequently, its psychometric properties were documented in detail.

Smith, Kendall, and Hulin (1969), the developers of the JDI, reported split-half internal consistencies (corrected by the Spearman-Brown formula) that ranged from .80 for the pay scale to .88 for the co-workers scale. With elementary school teachers, Coley (1980) reported an overall internal consistency measure of .90. In a study on custodial job satisfaction, Young (1982), although he omitted the promotion and co-workers scales in his study, reported internal consistency coefficients of .87, .72, and .71 for the work, supervision, and pay scales, respectively.

Extensive validation documentation was provided in Smith, Kendall, and Hulin (1969). In brief, these validation studies found significant discriminant and construct validity evidence. In fact, Victor Vroom (1964), after reviewing the developmental research of the JDI, commented:

> The product of this research, an instrument called the Job Descriptive Index, is without doubt the most carefully constructed measure of job satisfaction in existence today. The developers of the JDI have already obtained data from some 2500 workers and 1000 retirees in 21 different plants. The extensive methodological work underlying this measure as well as the available norms should insure its widespread use in both research and practice (p. 100).

Data Collection

Data for this study were collected from the vocational teachers through the use of a mail questionnaire that combined the LBDQ-12, the I-E Scale, the JDI, and general background information questions. Data collected from the general background questions were used to describe the sample. The mailing procedures were consistent with many of the recommendations suggested by Dillman (1978).

Finally, while the organizational charts of the 12 schools were different, the short link between the superintendent and teachers was uniform across the 12 joint vocational schools included in this study. The superintendent was clearly the school-site, instructional leader of each school and was responsible for achieving and maintaining school effectiveness. The flat and centralized span of control placed the superintendent close to the teachers and, thus, facillitated opportunities for superintendent-teacher interaction. Consequently, given the similarities of

the organizational structure of the 12 schools, the threat of span of control to the validity of this study was ameliorated.

Analysis of Data

This study was exploratory and nonexperimental in nature. Descriptive statistics that included frequencies, percentages, measures of central tendency, and measures of variability were used to organize and summarize the data. Analysis of variance (ANOVA) was used to test the seven hypotheses of this study. Since each independent variable was dichotomized at their respective mean scores, t-tests were used to determine if significant differences existed between the means of low and high subgroups for each independent variable. Moreover, since the dichotomization of the independent variables resulted in unequal cell sizes, an unweighted means analysis (Keppel, 1982) was utilized as the most appropriate statistical solution to the problem of nonorthogonality.

Data were keypunched and analyzed by means of the Statisitcal Package for the Social Sciences, version X, (Nie et al., 1983) and by BMDP Statistical Software (Dixon, 1983).

FINDINGS

Characteristics of Respondents

A questionnaire was sent to each of the 210 vocational teachers drawn from a simple random sample. These teachers were from the five traditional vocational education service areas: Agricultural Education (AE), Business and Office Education (BOE), Marketing and Distributive Education (MDE), Home Economics Education (HE), and Trade and Industrial Education (TI). Since the Ohio State Department of Education designated MDE teachers as Distributive Education (DE) teachers, the latter terminology was used throughout the remainder of this study. One hundred seventy-nine questionnaires (85.24 percent) were returned before the data analysis deadline.

However, two days after the first questionnaire mailout, a letter was received from a joint vocational school superintendent that stated, in essence, that he did not want his vocational teachers to participate in the study. Evidently, the teachers at this school were engaged in student recruitment activities, contract negotiations, and program reviews. Understandably, the superintendent did not want his teachers to be burdened with an additional activity. However, nine of the 25 teachers who were sent questionnaires had already responded. Nevertheless, since the superintendent did not want his school to participate in the study, the 25 teachers from his

school were excluded from the data analysis. Therefore, the sample size decreased from 210 to 185 vocational teachers. Because of the decrease in sample size, the risk level was re-calculated (Cochran, 1977). The risk level remained at an alpha of .05.

The total number of questionnaires returned from the 11 schools was 170 (91.89 percent). Since five questionnaires were determined to be unusable, the data sample was comprised of 165 questionnaires (89.19 percent). A summary of the questionnaire returns is presented in Table 1.

Handling of Nonrespondents. Of the 185 teachers in the sample, there were 15 teachers (8.11 percent) who did not respond. Since these 15 nonresponses introduced nonresponse error into the study, they were not ignored. If the results of the study were to be generalized to the entire sample and accessible population, nonrespondents had to be considered in the final analysis.

Table 1
Frequency and Percent of Questionnaires Returned by Wave Activity
(N=185)

Wave Activity	Questionnaires Returned f	%
First Wave Returns	143	77.30
Second Wave Returns	27	14.59
TOTAL	170*	91.89**

* Five questionnaires were returned unusable. Thus, 165 questionnaires comprised the data sample.
** The data sample response rate was lowered to 89.19 percent.

The assumption was made that late respondents were typical of nonrespondents (Miller and Smith, 1983). A statistical comparison was made between early and late respondents on demographic data and instrument scores. The results of this comparison suggested that late respondents were not significantly different from early respondents. Thus, the 15 nonrespondents were generalized to the data sample and accessible population.

A summary of the usable responses by service area teaching position

are presented in Table 2. Trade and Industrial Education teachers comprised the majority of the data sample with 87 usable questionnaires returned (52.73 percent). Distributive Education teachers had the fewest number of usable questionnaires returned at 8 (4.85 percent).

Description of Instrument Data

Cronbach alpha internal consistency coefficients were computed for each instrument. Mean scores and standard deviations were computed based on the scores obtained on each instrument. Moreover, the results of the independent variable mean splits were presented in terms of cell sizes, mean scores, and standard deviations for the eight cells that comprised the 2x2x2 design. Finally, since each independent variable was dichotomized by a mean split, independent t-tests were conducted to determine if the mean splits produced significantly different pairs for each independent variable.

Table 2
Frequency and Percentage of Respondents by Service Area Teaching Position

Service Area Teaching Position	f	%
Agricultural Education	22	13.33
Business and Office Education	32	19.39
Distributive Education	8	4.85
Home Economics Education	16	9.70
Trade and Industrial Education	87	52.73
TOTAL	165	100.00

Reliability of Instruments. For the three commercial instruments utilized in this study, Cronbach standardized item alpha coefficients were calculated. The results of the computations are presented in Table 3. Each of the instruments demonstrated relatively high internal consistency for the data sample of this study. Cronbach alpha coefficients ranged from .67 to .91. Although a .67 coefficient for the I-E Scale appeared low, this value was within the moderately high range of .65 to .79 established and reported by Rotter (1966) for this additive instrument.

Table 3
Cronbach Standardized Item Alpha Coefficients by Instrument

Instrument	Cronbach Alpha Coefficient (N=165)
LBDQ-12	
Consideration Scale	0.91
Initiating Structure Scale	0.85
Rotter I-E Scale	0.67
JDI	
Work Scale	0.78
Pay Scale	0.78
Promotion Scale	0.84
Supervision Scale	0.90
Job in General Scale	0.91

Skewness and Kurtosis. Descriptive statistics for the scores on the independent and dependent variables are presented in Table 4. The consideration and initiating structure mean scores were 30.42 and 35.92, respectively. The locus of control and total job satisfaction mean scores were 7.30 and 150.11, respectively. An examination of the frequency distributions of the four instrument scores indicated that the degree of skewness and kurtosis for each instrument was not extreme. Consequently, the assumptions of homogeneity of variance and normality were considered

tenable.

2x2x2 Cell Characteristics. A mean split was conducted on each of the three independent variables so that the 2x2x2 design could be operationalized. Cell size, mean score, and the standard deviation for each of the eight cells created by the mean splits are depicted in Figure 2. Since cell sizes were unequal, the research design for this study was unbalanced. Level I and Level II marginals were computed and are displayed in Tables 5 and 6, respectively.

Table 4
Instrument Mean Scores and Standard Deviations by Variable (N=165)

Variable	Mean	SD
Consideration	30.42	8.40
Initiating Structure	35.92	6.62
Locus of Control	7.30	3.30
Total Job Satisfaction	150.11	38.11

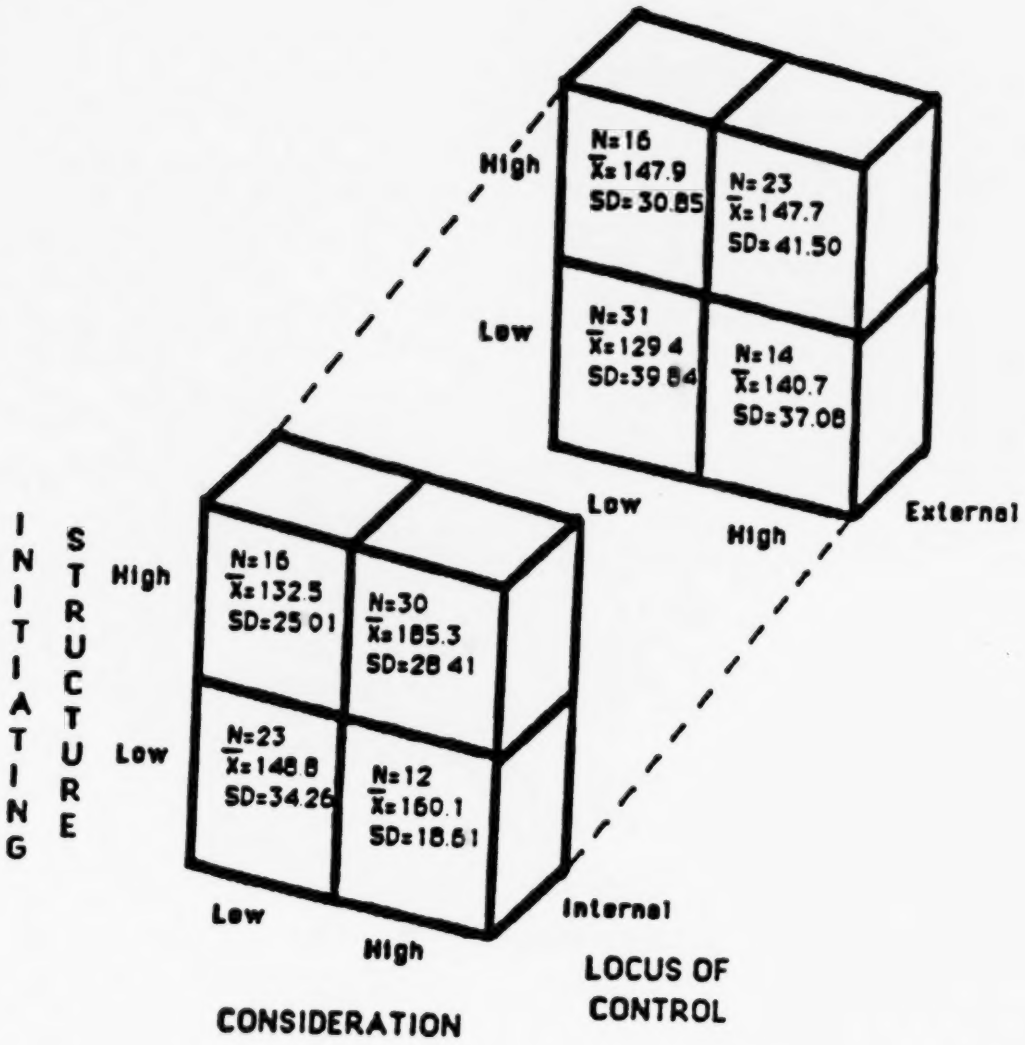

Figure 2

Cell Size, Total Job Satisfaction Mean Score, and Standard Deviation of Respondents Above and Below the Mean on the Consideration, Initiating Structure, and Locus of Control Variables

Table 5
Level I Marginals by Variables

Variable	Level	N	Mean	SD
Consideration	Low	86	138.6	34.99
Consideration	High	79	162.6	37.61
Initiating Structure	Low	80	141.6	36.46
Initiating Structure	High	85	158.1	38.08
Locus of Control	Internal	81	160.8	34.74
Locus of Control	External	84	139.8	38.57

Table 6
Level II Marginals by Variables

Variable	Level	N	Mean	SD
(Consideration is Low)				
Initiating Structure	Low	54	137.7	38.46
Initiating Structure	High	32	140.2	28.71
Locus of Control	Internal	39	142.1	31.50
Locus of Control	External	47	135.7	37.73
(Consideration is High)				
Initiating Structure	Low	26	149.7	31.05
Initiating Structure	High	53	169.0	39.15
Locus of Control	Internal	42	178.1	28.22
Locus of Control	External	37	145.1	39.51

Table 6 (continued)

(Initiating Structure is Low)				
Locus of Control	Internal	35	152.7	30.01
Locus of Control	External	45	132.9	38.94
(Initiating Structure is High)				
Locus of Control	Internal	46	166.9	37.08
Locus of Control	External	39	147.8	37.05

Independent t-tests. For each independent variable, independent t-tests were conducted to determine if the mean splits produced significantly different groups on each variable. Since the mean splits created unequal group sizes for each dichotomized independent variable, pooled variance estimates were computed. The results of the t-tests indicated that each independent variable was comprised of two significantly different groups. A summary of the t-test results is shown in Table 7.

Testing of Hypotheses

In accordance with the three-way factorial design, the logic of analysis was to first examine for a significant three-way interaction.

Since Hypothesis 1 stated, in effect, that there would be no significant three-way interaction, the results of its test are presented first. Since Hypotheses 2, 3, and 4 pertained to two-way interactions, the results of their respective tests are examined next. The final step examined hypotheses 5, 6, and 7 for possible main effects. The results of the significance tests of the seven hypotheses are summarized in Table 8.

Table 7
Summary of t-test Results by Independent Variable Levels

Independent Variable	Level	N	Mean	SD	DF	t-Pooled
Consideration	Low	81	23.32	5.04	163	20.11*
Consideration	High	84	37.54	3.97		
Initiating Structure	Low	74	30.16	4.52	163	17.09*
Initiating Structure	High	91	40.74	3.43		
Locus of Control	Internal	70	4.16	1.65	163	16.80*
Locus of Control	External	95	9.53	2.25		

*p<.05

Table 8
Summary of the Three-Way Analysis of Variance

Source of Variance	DF	SS	MS	F
Consideration (C)	1	13071.50	13071.50	11.40*
Initiating Structure (IS)	1	2725.78	2725.78	2.38
Locus of Control (LocCon)	1	8608.70	8608.70	7.51*
CxIS	1	2091.35	2091.35	1.82
CxLocCon	1	6483.36	6483.36	5.65*
ISxLocCon	1	633.31	633.31	0.55
CxISxLocCon	1	6501.83	6501.83	5.67*
Error (Within Cell)	157	180061.55	1146.88	
TOTAL	164	220177.38	1342.55	

*p<.05

The significance test result for Hypothesis 1 is presented in Table 8 in the row of the table designated as CxISxLocCon. Since the F-value of 5.67 was significant, Hypothesis 1 was rejected.

As a method for facilitating the assessment of the three-way interaction, the interaction was plotted by using the cell means of the three-way matrix depicted in Table 9. The plot of the interaction is shown in Figure 3.

Table 9
Matrix of Three-Way Factorial Cell Means

		Locus of Control			
		Internal		External	
		Consideration		Consideration	
		Low	High	Low	High
Initiating Structure	Low	148.8	160.1	129.4	140.7
	High	132.5	185.3	147.9	147.7

The three-way interaction depicted in Figure 3 was represented by a disordinal and an ordinal interaction. The disordinal interaction was between the consideration and initiating structure variables at the internal level of the locus of control variable. The ordinal interaction was between the consideration and initiating structure variables at the external level of

the locus of control variable. An inspection of the two plots indicated that the interaction of the consideration and initiating structure variables changed at different levels of the locus of control variable. In other words, the two-way interaction of consideration and initiating structure was different for internals than it was for externals. Thus, any statements that described the interaction of consideration and initiating structure must be made in reference to the level of control.

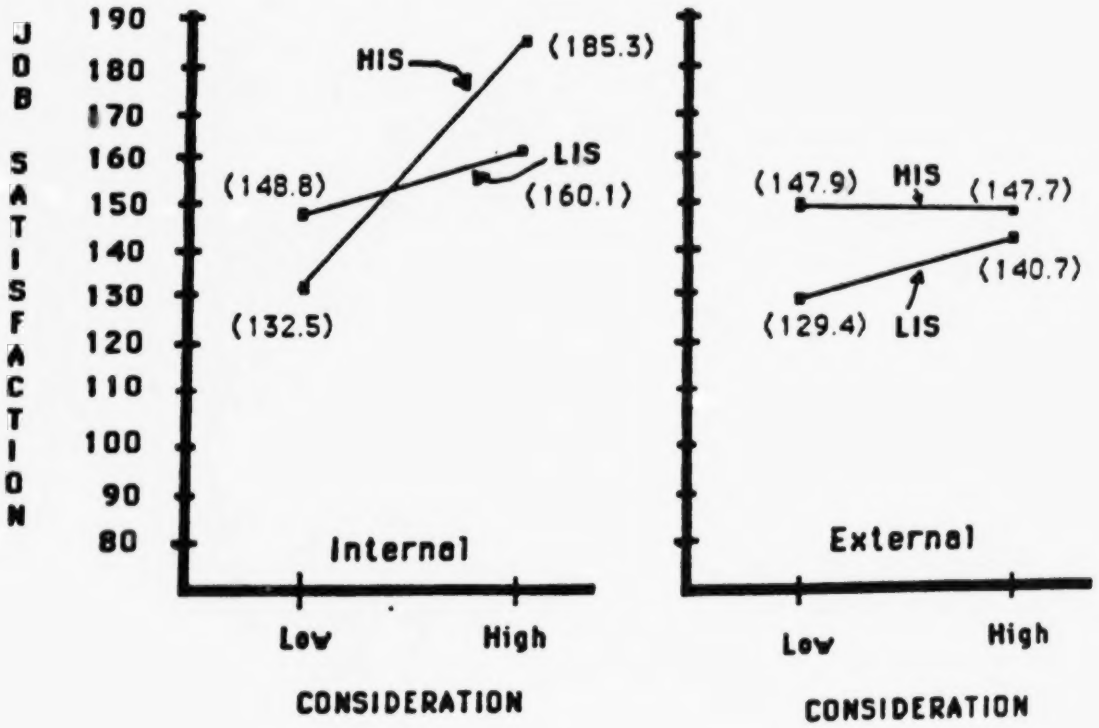

Figure 3
Plot of Three-Way Interaction

Four major findings were observed from the three-way interaction plot shown in Figure 3:

1. Internally controlled joint vocational school vocational teachers who perceived their superintendent to be on the HC-HIS dimensions of leader behavior had a higher total job satisfaction mean score ($\overline{X}$=185.3) than externally controlled vocational teachers who perceived their superintendent to be on the HC-HIS dimensions ($\overline{X}$=147.7).
2. Internally controlled joint vocational school vocational teachers who perceived their superintendent to be on the HC-LIS dimensions of leader behavior had a higher total job satisfaction mean score ($\overline{X}$=160.1) than externally controlled vocational teachers who perceived their superintendent to be on the HC-LIS dimensions ($\overline{X}$=140.7)
3. Internally controlled joint vocational school vocational teachers who perceived their superintendent to be on the LC-HIS dimensions of leader behavior had a lower total job satisfaction mean score ($\overline{X}$=132.5) than externally controlled vocational teachers who perceived their

superintendent to be on the LC-HIS dimensions ($\overline{X}$=147.9)

4. Internally controlled joint vocational school vocational teachers who perceived their superintendent to be on the LC-LIS dimensions of leader behavior had a higher total job satisfaction mean score ($\overline{X}$=148.8) than externally controlled vocational teachers who perceived their superintendent to be on the LC-LIS dimensions ($\overline{X}$=129.4).

In sum, the total job satisfaction mean scores of internally and externally controlled vocational teachers differed on each of the corresponding dimensions of leader behavior. Consequently, Hypothesis 1 was rejected. Moreover, the three-way interaction indicated that internally controlled vocational teachers had the highest total job satisfaction mean score under a superintendent who they perceived to be on the HC-HIS leader behavior dimensions ($\overline{X}$=185.3). However, for externally controlled vocational teachers, the highest total job satisfaction mean score was shared, in essence, with two leader dimension pairs: LC-HIS ($\overline{X}$=147.9) and HC-HIS ($\overline{X}$=147.7).

On the other hand, the lowest total job satisfaction mean score for internally controlled vocational teachers was under a superintendent who

they perceived to be on the LC-HIS leader dimension ($\overline{X}$=132.5). The lowest total job satisfaction mean score for externally controlled vocational teachers was under a superintendent who they perceived to be on the LC-LIS dimensions of leader behavior ($\overline{X}$=129.4).

CONCLUSIONS

Three-Way Interaction

The result of the significance test for Hypothesis 1 indicated that there was a significant three-way interaction between the independent variables on job satisfaction. An examination of the three-way interaction plot revealed the most interesting conclusions of the study. The high-high paradigm appeared tenable for only the internally controlled vocational teachers. The externally controlled vocational teachers had, for all practical purposes, the same total job satisfaction mean score under a superintendent who they perceived as being high in initiating structure and either low or high in consideration. However, the high-high paradigm also maintained that a leader who was low on both dimensions had the least optimal leadership style of the four dimension pairs. For internals, this was not supported as indicated by the lowest total job satisfaction mean score under superintendents who were perceived as being low in consideration and high in

initiating structure. For externals, the low-low dimension received the lowest total job satisfaction mean score, which was consistent with the high-high paradigm framework. Thus, one can conclude that the high-high paradigm appeared tenable for internals, although the low-low dimension of the paradigm was not supported. Conversely, the high-high paradigm was not supported by externals, although the low-low dimension of this framework appeared tenable.

Implications and Recommendations

The findings and conclusions of this study provided practical implications and recommendations for the improvement of school-site leadership in central Ohio joint vocational schools. While the results of this study were generalizable to the accessible population, school-site leaders of other schools, and anyone else interested in leadership and leadership development, may find the implications illuminating and the recommendations beneficial.

Consideration. The finding that the leadership dimension of consideration had a significant effect upon the job satisfaction of vocational teachers supported the findings of Halpin (1966), Pryer and Distefano (1971), Harlan (1980), Young (1982), and Ramsden (1983). These scholars reported

that subordinates who perceived their leader as being high in consideration had greater job satisfaction than subordinates who perceived their leader as being low in consideration. In this study, considerate leaders had teachers who were satisfied with their job. Evidently, vocational teaching and considerate leadership made a good match.

The conclusion made about consideration in this study illuminated an important implication. Human relation techniques of the superintendents appeared to be important to the vocational teachers of this study. This implication was consistent with the findings of Purkey and Smith (1984) in their review of effective schools. In essence, school-site leaders who encouraged collaborative planning and collegial relationships had higher satisfied teachers and higher achieving schools than those leaders who tended to ignore the human relations approach to administration. Moreover, school-site leaders who were open to suggestions for improving school policy were viewed by their teachers in a positive light. By and large, the effective schools research found that school-site leaders who involved their teachers in the school decision-making process had schools that were enviable places to work.

Therefore, given the importance of a considerate style of leadership to the enhancement of school effectiveness, the recommendation was made that

school-site leaders needed to be knowlegeable and skilled in human relation techniques. An annual assessment of the level of considerate behavior demonstrated by the superintendent, as perceived by the teachers, would help identify interpersonal skill training and development needs. Low scores on the LBDQ-12 consideration scale, for example, would signal the superintendent that his or her human relations approach needed improvement. Inservice training that emphasized self-discovery through behavior modeling and role playing with video taped feedback might assist in improving the human relation skills of the superintendent.

Initiating Structure. The conclusion that initiating structure was not supported in this study was consistent with the conclusion made by Young (1982). However, the apparent lack of support for this conclusion was inconsistent with the contentions made by Blake and Mouton (1964), Fast (1964), and Halpin (1966) who posited, in essence, that an effective leader was committed to obtaining organizational goals and objectives and who made clear his or her expectations of subordinates. In other words, an effective leader was, in part, oriented toward structure.

Although there was no statistically significant main effect for initiating structure, a plot of the LIS and HIS cell means clearly suggested that teacher job satisfaction increased as initiating structure increased.

Thus, for practical purposes, the vocational teachers in this study evidently were more satisfied under a superintendent who was structured than under one who was not so structured.

The importance of initiating structure was consistent with the findings from studies done on effective schools. School-site leaders who created order and discipline, and who demonstrated a commitment to academic goals, were considered by their subordinates as being effective leaders. Therefore, the lack of a significant main effect for initiating structure in this study notwithstanding, the fact that initiating structure played an important role in achieving effective schools remained tenable.

Therefore, the recommendation was made that superintendents annually assess their level of structure as perceived by their teachers. The LBDQ-12 initiating structure scale would help identify initiating structure training and development needs. For example, low scores on the initiating structure dimension might indicate that a leader had not demonstrated a strong drive for task completion or had not shown a strong drive for the pursuit of academic goals. Maybe self-confidence and assertiveness were lacking. Whatever the case may be, the problem of a lack of structure can be ameliorated by the superintendent by actively pursuing a personal development program. Numerous programs are available in self-improvement

books, programmed instruction, and correspondence courses. Furthermore, active involvement in professional organizations where one can receive new assignments and responsibilities would enhance the ability of the superintendent to structure the work of others to get the job done, while, concomitantly, not sacrificing school effectiveness.

Locus of Control. The conclusion that locus of control may be an important factor influencing teacher job satisfaction supported a similar conclusion made by other researchers (Pryer and Distefano, 1971; Runyon, 1973; Evans, 1974; Mitchell, Smyser, and Weed, 1975; and Durand and Nord, 1976). The findings of this study suggested that internally controlled vocational teachers had a higher job satisfaction than externally controlled vocational teachers. Since teacher job satisfaction contributed to effective schools, the issue of whether a superintendent should hire only internally controlled vocational teachers was raised. Perhaps externally controlled teachers in this study tended to be dissatisfied with organizational life in general since they believed that they had little control over it. Research is needed to determine whether internals or externals have the highest rate of turnover and absenteeism in joint vocational schools. Findings from such research would help answer the question of whether internals or externals contribute more to effective schools.

Since the locus of control concept was found to be a significant factor influencing teacher job satisfaction, perhaps preservice and inservice vocational education leadership development programs may find this concept a fruitful topic of study. Furthermore, research is needed to learn how vocational teacher age, sex, education level, and teaching experience are related to locus of control. Do older teachers tend to be internals or externals? Do women tend to be more external than men? Do the number of years teaching experience affect the internality or externality of the individual? Does the level of education attained have an effect on the locus of control orientation?

Moreover, there is a need for research to investigate the locus of control of the school-site leader in relation to leader behavior. Perhaps external superintendents demonstrated directive behavior or coercive power because they believed that they were not able to influence others through social interaction. By initiating a high degree of structure, external superintendents may have found better success in controlling the work situation than by attempting to demonstrate a high level of consideration. With additional research on the locus of control phenomena, this dimension of personality may yield a better understanding of why leaders behave the way they do.

Two-Way Interactions. When the consideration and initiating structure variables were crossed in this study, the findings indicated that the high-high leader paradigm was supported. This result was consistent with the conclusions made by Blake and Mouton (1964), Fast (1964), Halpin (1966), Sergiovanni and Starret (1971), Williams (1980), and Pirzadeh (1984). These scholars posited, in essence, that subordinates had greater job satisfaction under a leader who was high in both consideration and structure than under any other leadership dimension pair.

However, when the locus of control and initiating structure variables were crossed, the finding that internals had greater job satisfaction than externals under a superintendent perceived as being directive was in conflict with the findings reported by Runyon (1973), Evans (1974), and Mitchell, Smyser, and Weed (1975). These scholars reported, in effect, that the job satisfaction of externals would be greater than internals under conditions of structured leadership. The rationale was that internals were dissatisfied under structured leadership since they were unable to control their destiny. Externals, on the other hand, were frustrated under non-structured leadership since the lack of structure meant that their destiny was controlled by them alone, which was contrary to their belief.

The inconsistency that was found in this study perhaps may be explained

simply by the notion that externally controlled teachers were dissatisfied with the joint vocational school organization in general. On the other hand, internally controlled teachers may have preferred structured leaders who were committed to achieving organizational goals and objectives. Studies of similar purpose and design should be conducted with other subordinate populations in the central Ohio joint vocational schools, such as academic teachers, counselors, and clerical and custodial staff, to determine if the same inconsistency was tenable for these populations. If the same inconsistency does exist, the results would suggest that externals may be dissatisfied with joint vocational school organizational life, regardless of the level of leadership structure.

When consideration and locus of control interactive effects were analyzed, the results revealed that internally controlled teachers had greater job satisfaction than externally controlled teachers under a high considerate style of leadership. This finding corroborated the conclusions reported by Runyon (1973), Evans (1974), and Mitchell, Smyser, and Weed (1975). Again, this study found strong support for a considerate style of leader behavior in the vocational school setting and re-emphasized the need for superintendents to demonstrate a high level of competence in human relation skills. Additional research of similar design and purpose is needed to determine if

consideration is supported by the other populations working in joint vocational schools.

Three-Way Interaction. When consideration, initiating structure, and locus of control were crossed, the most interesting implications of the study emerged. The high-high leader paradigm appeared tenable for only the internally controlled vocational teachers. However, the low-low dimension of this paradigm was not supported. Conversely, the high-high paradigm was not supported by externals, although there was support for the low-low dimension of this paradigm.

The conclusion that the low-low dimension for internals was not consistent with the high-high paradigm supported the findings of Runyon (1973). Runyon concluded from his study that internals would be least satisfied under a leader who is low in consideration and high in initiating structure. However, support for the high-high paradigm by internals was inconsistent with Runyon. According to Runyon, one would expect internals to have the highest total job satisfaction under a leader who they perceived to be high in consideration and low in initiating structure.

Evidently, internals in this study were not adversely affected by a leader who demonstrated structure. In fact, if the structure was low, internals tended to have a decrease in their total job satisfaction mean

score. Thus, the need for a superintendent to demonstrate a considerable amount of structure was reiterated by this disordinal interaction between consideration and initiating structure at the level of internals.

The lack of complete support for a high-high paradigm for externals was consistent with the prediction of Runyon (1973). Regardless of the level of consideration, externals were more satisfied under highly directive supervision. As posited by Runyon and corroborated in this study, externals had the lowest job satisfaction under a leader who was perceived to be low on both leadership dimensions. Again, the importance of structure in leadership style was emphasized.

When viewed in total, the conclusions of this study were consistent with the final conclusions made by other researchers (Hunt and Liebscher, 1973; Kerr, Schriescheim, Murphy, and Stogdill, 1974; Larson, Hunt, and Osborn, 1976; Nystrom, 1978; Valenzi and Dessler, 1978; and Ramsden, 1983). These researchers concluded, as did this researcher, that the high-high leadership paradigm was not tenable for all followers in all situations.

Moreover, the results of this study suggested that the locus of control personality dimension was an important factor influencing vocational teacher job satisfaction. This finding supported the conclusion made by other

researchers (Pryer and Distefano, 1971; Runyon, 1973; Evans, 1974; and Mitchell, Smyser, and Weed, 1975) that the locus of control dimension was an important personality factor influencing employee job satisfaction in the formal organization. This implied that joint vocational school superintendents need to know the locus of control of their vocational teachers so that appropriate leader behavior can be demonstrated. For example, the results of this study indicated that a superintendent who was perceived by an internally controlled teacher as being low in consideration and high in initiating structure was not the most optimal leader behavior for these individuals. If a superintendent was not aware that internally controlled teachers had the highest job satisfaction under a leader who was perceived as being high in both consideration and structure, then any attempt to improve school-site leadership by a superintendent who was not perceived as being high on both dimensions may have been problematic.

Furthermore, the results of this study supported the notion of treating the consideration and initiating structure framework in a situational, dynamic mode as Kerr et al. (1974) suggested. Since superintendent leadership behavior was perceived differently by the vocational teachers, the superintendents, in order to optimize teacher job satisfaction, needed to know how their leader behavior was perceived by these teachers. Once

superintendents know how their leadership behavior was perceived by their vocational teachers, superintendents can make appropriate adjustments in their leader behavior, as suggested by the three-way interaction, to optimize the internality and externality personalities of these teachers. The overall implication was that superintendents needed to adjust their leader behavior so that they were perceived by each teacher as having the optimal leadership style; thus, maximizing teacher job satisfaction and enhancing the effectiveness of their schools.

The results of this study did not offer a prescription for leader behavior that would serve as a panacea for ameliorating all the problems inherent in school-site leadership. In the final analysis, the results of the study implied that a superintendent might optimize vocational teacher job satisfaction by investigating these two heuristic findings:

1. Internally controlled vocational teachers have the highest job satisfaction under a leader who they perceive as being high in both consideration and initiating structure.

2. Externally controlled vocational teachers have the highest job satisfaction under a leader who they perceive to be high in initiating structure, regardless of the level of consideration.

Although no cause-and-effect conclusions were drawn from the findings, these heuristics should be beneficial to joint vocational school superintendents, and anyone else in a leadership position, who are

interested in increasing the job satisfaction of their subordinates so that the effectiveness of their organizations might be enhanced.

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